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(54) Title: PROCESS FOR PRODUCING OPTICALLY ACTIVE 3-(4-HYDROXYPHENYL)PROPIONIC ACIDS

$$\begin{array}{c|c}
R^{\xi} & & COOH \\
HO & & R^{7} & & R^{8} & OR^{2}
\end{array}$$
(6)

$$R^{\frac{1}{2}} \xrightarrow{R^{\frac{1}{2}}} CHO$$

$$R^{\frac{1}{2}} \xrightarrow{R^{\frac{1}{2}}} R^{\frac{1}{2}}$$

$$(1)$$

(57) Abstract: The present invention relates to a process for producing an optically active 3-(4hydroxyphenyl)propionic acid useful as intermediates for medicines, through short steps in good yield and with high optical purity. More specifically, the present invention relates to a process for producing an optically active 3-(4-hydroxyphenyl)propionic acid of the formula (6): wherein R2 is an alkyl group; R5 to R8 are each independently a hydrogen atom or a substituent; and the symbol * is an chiral carbon atom, or a salt thereof, which comprises reacting a benzaldehyde of the formula (1): wherein R¹ is a protective group; and R⁵ to R⁸ are each the same as defined above, with a glycolic acid derivative of the formula (2): wherein R3 is a hydrocarbon group; and R2 is the same as defined above, hydrolyzing the resulting product to give a cinnamic acid of the formula (4): wherein R1, R2 and R5 to R8 are each the same as defined above, or a salt thereof, and subjecting the resulting cinnamic acid (4) or a salt thereof to asymmetric hydrogenation to give an optically active phenylpropionic acid of the formula (5): wherein all the symbols are each the same as defined above, or a salt thereof, followed by deprotection.



WO 2005/051882 A1 III



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